UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

May 11, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

SUBJECT: **Final Environmental Impact Statement for Hydropower Licenses for the Martin Dam Hydroelectric Project (FERC Project No. P-349-173) located on the Tallapoosa River in Tallapoosa, Coosa, and Elmore Counties, Alabama CEQ# 20150094**

Dear Secretary Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced Final Environmental Impact Statement (FEIS) in accordance with its responsibilities under Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The Federal Energy Regulatory Commission (FERC) proposes to approve a new license for the Martin Dam Hydroelectric Project, FERC Project No. 349-173. The Martin Dam Project is located on the Tallapoosa River in Tallapoosa, Coosa, and Elmore Counties, Alabama. The Martin Dam Project is owned by Alabama Power Company (APC). The current license expired on June 9, 2013. On June 8, 2011, APC filed an application with FERC to relicense the existing Martin Dam Hydroelectric Project. EPA provided comments on the DEIS for this proposed action in a letter dated August 13, 2013.

Project Background

EPA recently reviewed the FEIS for the Update to the Water Control Manual (WCM) for the Alabama-Coosa-Tallapoosa (ACT) River Basin. The WCM describes how federal projects within the basin should operate in order to meet their authorized purposes. The Martin Dam Project is a non-federal project located within the ACT River Basin and described in the WCM FEIS as having 48.7% of the conservation storage of the entire basin.[1] Therefore, the Martin Dam Project controls a significant portion of the flows in the Tallapoosa River and the overall ACT River Basin.

The Martin Dam Project has an installed capacity of 182.5 megawatts (MW) and occupies 1.39 acres of federal lands. The existing project consists of: (1) the Lake Martin reservoir, with a surface area of 40,000 acres at a normal full pool elevation of 491 feet mean sea level (msl); (2) a 2,000-foot-long concrete gravity dam and earth dike section that includes (a) a 720-foot-long gated spillway section with twenty, 30-foot-long by 16-foot-high vertical lift spillway gates, (b) a 280-foot-long concrete gravity intake structure, (c) a 255-foot-long concrete gravity non-

[1] USACE - FEIS for ACT Water Control Manual Update (November 2014)

overflow section on the right abutment, and (d) an approximately 1,000-foot-long earth embankment on the left abutment; (3) headworks containing four steel penstocks and 12, 9-foot-wide by 24-foot-high intake gates fitted with trashracks; (4) a 307-foot-long, 58-foot-wide, and 99-foot-high brick and concrete, steel-frame powerhouse; (5) four vertical Francis turbines that power four generating units, with installed capacities of 45.8 MW, 41.0 MW, 40.5 MW, and 55.2 MW, for a total installed capacity of 182.5 MW; (6) two, 450-foot-long transmission lines leading from the powerhouse to the Martin switchyard; and (7) appurtenant facilities. The project generates about 375,614 megawatt-hours (MWh) per year.

Under the existing license, the Martin Dam Project operates as a peaking project and typically is operated to maintain elevations in Lake Martin between the bounds of a flood control curve and an operating curve. Water levels in Lake Martin fluctuate by as much as 11 feet between elevations 480 and 491 feet msl. FERC indicates that the Martin Dam Project benefits are hydroelectric power; limited seasonal flood control during the winter when the reservoir is in drawdown condition; recreation, municipal, and industrial water supply; aquatic flow maintenance; and navigation flow support.[2]

EPA Comments

Our comments provided to the FERC on the DEIS primarily focused on the areas of meeting water quality standards, ecological flows, impacts to aquatic life/endangered species, coordination with the U.S. Army Corps of Engineers (USACE), shoreline management plan, stakeholder comments, public engagement and outreach program plan, environmental justice, and children's health. EPA appreciates that the FERC provided responses to our comments in a dedicated section of the FEIS – Appendix D, however as noted FERC did not provide fully adequate responses to our comments on the DEIS. Please see our specific responses below.

Water Quality Standards (WQS)

EPA recommended the FEIS provide additional details on what programs and design changes have been made over the life of the previous FERC license for the Martin Dam project to meet the goal of the existing WQS for Dissolved Oxygen (DO). EPA also recommended DO monitoring (beyond three years post license) be included in the WQC and that, in particular, all future low-flow events be monitored when the potential for non-compliance of the DO standard is high. EPA also requested that FERC and or APC provide clarification in the FEIS on what additional measures (or adaptive management) that would be implemented to ensure compliance with the DO standard in the event the standard is not met. To conclude our comments on WQS, we requested that FERC provide clarification in the FEIS regarding how far downstream from the project the 4.0 mg/L DO WQS applies.

FERC Response: Because both the Yates and Thurlow developments operate mainly as run-of-river developments and rely on the Martin Project's storage to meet the minimum flow requirement for the Thurlow Project, Alabama Power must release water continually from Martin Dam, usually by generating. Therefore, there is little non-generation time to monitor or to which to apply a non-generation DO criterion. The 401 Water Quality Certificate requires

[2] p. xv of Martin Dam DEIS

monitoring compliance with the state water quality criteria "...immediately downstream of Martin dam at the existing monitoring station..."

This EIS discusses Alabama Power's tailrace temperature and DO data from 2002 through 2009. That water quality record includes a severe drought year, with an estimated average return frequency of greater than 50 years, in 2007. It also includes only two incidents of tailrace DO conditions falling below 4 mg/L while generating. Since 2009, Alabama Power has continued to monitor DO in the summer during generation as a requirement of the existing license. Combined with this existing data, o three more years of post-license monitoring, the data record should be adequate to evaluate the effectiveness of Alabama Powers' DO measures.

> EPA Response: The DO standard in Alabama below a Hydropower project is 4.0 mg/L when generating and 5.0 mg/L when not generating. ADEM Admin. Code r. 335-6-10 states that "In no event shall the dissolved oxygen level be less than 4 mg/l due to hydroelectric turbine discharges from existing hydroelectric generation impoundments." Based on our review of the summary of water quality data provided on p. 52 of the FEIS there is insufficient information to determine compliance with the State water quality standard for DO. Minimum DO readings for 2002-2005 and 2006-2009 represent conditions that may not be meeting the standard. The minimum DO of 3.46 mg/L (2002-2003) is not meeting the standard under any condition (generation or non-generation periods). The minimum of 4.17 mg/L (2006-2009) would not meet the standard if this reading was taken during a non-generation period, however the reviewer of the EIS does not have this information. FERC should have provided all tailrace DO data collected by APC in the DEIS/FEIS and indicated when the project was generating and not generating. Without this information, compliance with the DO standard cannot be determined. EPA has concerns that this EIS process has not provided full disclosure of potential impacts to water quality from this proposed action as required by § 1500.1. Since the standard applies to both generating and non-generating periods, DO monitoring requirements in the license should include monitoring during generating and non-generating periods to determine compliance with the standard.

Instream Flow

EPA recommended incorporation of variable flows in the Martin Dam Project license, including the seasonal, intra-annual and inter-annual variable flow patterns needed to maintain or restore processes that sustain natural riverine characteristics. EPA also recommended that the Martin Dam Project license be issued in a manner to mimic the natural conditions as closely as possible in the downstream waters, and we suggested the use of multiple endpoints to demonstrate the protection of aquatic life designated uses.

FERC Response: The Martin Project is operated to meet the instream flow requirements established for the Thurlow Dam Project (FERC, 1994). Modification of the license for the Thurlow Dam is not part of this license action; consequently, an instream flow analysis below Thurlow Dam does not need to be considered here.

> EPA Response: EPA remains concerned that variable flows are not being fully considered in the proposed license for Martin Dam Project. EPA believes including the

seasonal, intra-annual and inter-annual variable flow patterns is needed to maintain or restore processes that sustain natural riverine characteristics in the Tallapoosa River system and that they should be reviewed within each license. For this reason, EPA believes coordination of licenses using a basin-wide approach is critical to ensuring protection of water quality below FERC projects.

Aquatic Life and Endangered Species

EPA recommended the adoption of the FWS proposed recommendations for the Martin Dam Project relicense.

EPA Response: Based on EPA's review of Appendix D no response was provided by FERC for this comment.

Coordination with the U.S. Army Corps of Engineers (USACE)

EPA recommended that FERC consider changing the expiration dates of FERC licenses so that in the future river systems can be evaluated at the same time, optimally for the entire ACT system, but at a minimum for the Tallapoosa dams - Yates, Thurlow and Martin- as the operations of these systems are directly related. Until such time as the license renewals can be synchronized, EPA recommended that FERC consider working with the USACE to adaptively manage these dams such that when one license is evaluated, improvements in instream flow and water quality standards can be adaptively added to those licenses that are not up for renewal.

FERC Response: The Corps has finalized its EIS for its Water Control Manuals. Staff has reviewed the Corps' final EIS and its draft manuals and incorporate several elements of the Corps' planning document to coordinate our efforts. As discussed above, we recommend a provision requiring Alabama Power to review the Corps' regulation manuals, once finalized, for consistency with the Tallapoosa River portions of ADROP, and file a report of its findings along with any recommendations for modifications to the aforementioned portions of ADROP to be consistent with the finalized manuals.

EPA Response: EPA appreciates the FERC's efforts to incorporate elements of the USACE's planning document and to coordinate FERC relicensing efforts with the USACE. However, EPA believes there may be more opportunities within the FERC relicensing process to coordinate licenses within basin, especially when instream flow requirements for other projects (in this case - Thurlow Dam Project) significantly impact operations at the project under review.

Shoreline Management Plan

EPA recommended that the FEIS provide a clearer description of how and when the different components of the SMP will be implemented by APC.

EPA Response: Based on EPA's review of Appendix D no response was provided by FERC for this comment.

Drought Management and Tailrace Monitoring Plans

EPA request that FERC and APC coordinate with EPA Region 4 on the development of the *Drought Management Plan* and the *Tailrace Water Quality Monitoring Plan.*

FERC Response: We are no longer recommending that Alabama Power develop an independent drought management plan. We now recommend implementing the ADROP which has been developed collaboratively by Alabama Power, the Corps, and the Alabama Office of Water. The ADROP has been subject to NEPA review in the Corps' process. We have recommended adding EPA to the consultation list for changes to the ADROP.

The ADROP agencies attempted to take into account the needs of the State of Georgia. The use of the Tallapoosa portion of the ADROP was recommended by Interior. According to Alabama Power ADROP changes to the ADROP will involve consultation with "relevant" federal agencies.

> EPA Response: EPA appreciates the response provided for the Drought Management Plan, however no response was provided for our comment regarding the Tailrace Water Quality Monitoring Plan.

Environmental Justice

EPA recommended that the FEIS include an EJ analysis that includes descriptions of the local demographics and identifies low-income and minority populations that have the potential to be impacted by the proposed action. We also recommended the FEIS describe efforts made to meaningfully engage these populations in the decision-making process. In addition, EPA recommended the FEIS identify communities with EJ concerns that may engage in subsistence activities within the Lake Martin boundaries (i.e., subsistence fishing). We also recommended that FERC evaluate the potential for communities with EJ concerns to be impacted downstream as a result of the proposed action, and that a summary of EJ comments or concerns identified during the public involvement process along with agency responses to those concerns and efforts to avoid, minimize or mitigate potential impacts should be included in the FEIS.

FERC Response: The Scoping Document issued on August 5, 2008, requested information on socioeconomic issues, fishing, recreation, and land use. We received input on all of these topics and included those analyses in the appropriate places in the EIS. We analyzed issues related to potentially competing interests and we discussed fish consumption advisories which can affect those who participate in subsistence fishing. We did not, however, receive any comment or make any observation indicating an issue of environmental justice. Therefore, we did not include distinct environmental justice sections in this EIS. No change to the text is required.

> EPA Response: EPA understands that a scoping meeting was held and scoping comments were received, however, it is unclear what efforts if any were made to meaningfully engage minority and low-income populations in the decision-making process consistent with the EO 12898. It is also unclear whether minority and low-income populations exist in the vicinity of the project area and to what extent utilize the resources in the area. This information would have been helpful for targeting outreach efforts to ensure that minority

and low-income population information to and from minority or low-income populations regarding subsistence, recreation, and/or flooding, etc.

Children's Health

EPA recommended the FEIS include an analysis and disclosure of potential effects of the proposed action on children. We recommended the EIS identify demographics of children under the age of 18, including children that may use or be affected by the resource (i.e. children within the vicinity of the dam and that live downstream of the project). EPA also recommended that the potential direct, indirect and cumulative environmental and human health effects of the proposed project be clearly described and analyzed in the FEIS. We also recommended that all disproportionate impacts to children related to the proposed action efforts to avoid, minimize and mitigate those impacts be documented in the FEIS.

FERC Response: We revised section 3.3.5, Recreation Resources and Land Use, to incorporate the local demographics of children under the age of 18. As we discuss in section 3.3.2, Aquatic Resources, there are currently no fish consumption advisories for Lake Martin or the area immediately downstream of the dam (Yates reservoir). The draft and final EIS recognize Thurlow reservoir and the lower Tallapoosa River that have fish consumption advisories for women of child-bearing age and for small children. No change to the text is required.

EPA Response: EPA appreciates the incorporation of demographic information related to children, and the inclusion of fish advisory information for the various lakes, rivers and reservoirs. It is unclear from your response, to what extent, if any, the proposed project, may or may not impact children or women of child bearing age.

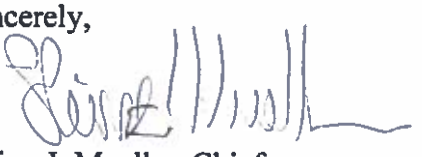
Editorial Comments

Reference is made to EPA Region 4 making a comment on the DEIS related to the Cumulative Impact Analysis and the RESTORE Act (Comment 56 in Appendix D of FEIS). EPA did not make comments related to the RESTORE Act, therefore we request that the record be amended to accurately reflect our comments on the DEIS.

In addition, EPA provided an e-copy of our letter (DEIS Comments) to FERC by email on August 13, 2013, however several references are made in the FEIS to EPA providing comments on August 20, 2013 after the due date. See attached email correspondence. EPA request that the record be amended to accurately reflect when EPA comments on the DEIS were provided to FERC.

Summary
The EPA appreciates the opportunity to review this FEIS. We request that the FERC provide specific responses in the Record of Decision (ROD) to our outstanding concerns listed above. We also request that the FERC provide EPA with a copy of the final signed ROD. Should the FERC have questions regarding our comments, please feel free to contact Dan Holliman of my staff at 404/562-9531 or holliman.daniel@epa.gov.

Sincerely,



Heinz J. Mueller, Chief
NEPA Program Office
Resource Conservation and Restoration Division

Attachments: EPA Comments on Martin DEIS – August 13, 2013
Email from EPA to FERC transmitting DEIS Comments

cc: Alabama Department of Environmental Management

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

August 13, 2013

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

SUBJECT: **Draft Environmental Impact Statement for Hydropower Licenses for the Martin Dam Hydroelectric Project (FERC Project No. P-349-173) located on the Tallapoosa River in Tallapoosa, Coosa, and Elmore Counties, Alabama CEQ# 20130163**

Dear Secretary Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced Draft Environmental Impact Statement (DEIS) in accordance with its responsibilities under Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The Federal Energy Regulatory Commission (FERC) proposes to approve a new license for the Martin Dam Hydroelectric Project, FERC Project No. 349-173. The Martin Dam Project is located on the Tallapoosa River in Tallapoosa, Coosa, and Elmore Counties, Alabama. The Martin Dam Project is owned by Alabama Power Company (APC). The current license expired on June 9, 2013. On June 8, 2011, APC filed an application with FERC to relicense the existing Martin Dam Hydroelectric Project.

Project Background

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[1] USACE - DEIS for ACT Water Control Manual Update (March 2013)

embankment on the left abutment; (3) headworks containing four steel penstocks and 12, 9-foot-wide by 24-foot-high intake gates fitted with trashracks; (4) a 307-foot-long, 58-foot-wide, and 99-foot-high brick and concrete, steel-frame powerhouse; (5) four vertical Francis turbines that power four generating units, with installed capacities of 45.8 MW, 41.0 MW, 40.5 MW, and 55.2 MW, for a total installed capacity of 182.5 MW; (6) two, 450-foot-long transmission lines leading from the powerhouse to the Martin switchyard; and (7) appurtenant facilities. The project generates about 375,614 megawatt-hours (MWh) per year.

Under the existing license, the Martin Dam Project operates as a peaking project and typically operates to maintain elevations in Lake Martin between the bounds of a flood control curve and an operating curve. Water levels in Lake Martin fluctuate by as much as 11 feet between elevations 480 and 491 feet msl. FERC indicates that the Martin Dam Project benefits are hydroelectric power; limited seasonal flood control during the winter when the reservoir is in drawdown condition; recreation, municipal, and industrial water supply; aquatic flow maintenance; and navigation flow support.[2]

Alternatives

Three alternatives were evaluated in the DEIS:

1) Alternative 1 - APC's proposal which includes continuing to operate the project in a peaking mode; with the following modifications to project operation: (1) to help ensure that Lake Martin reaches its summer pool level by the end of May each year, raise the winter flood pool by 3 feet, and raise the operating curve and drought curve proportionately during the same timeframe; (2) to help minimize downstream flooding, revise operation for flood control by reducing outflow from Martin dam during certain conditions when the reservoir elevation is decreasing; (3) to provide higher reservoir levels for recreation during the fall, implement a conditional fall extension of the flood control curve to elevation 491 feet from September 1 to October 15; and (4) to facilitate seawall and boat dock maintenance, and/or construction, upon FERC approval of the proposed 3-foot increase of the winter pool elevation, lower the reservoir elevation during the winter months to 481 feet every 6 years. In addition, APC proposes measures for operation during low flow or drought conditions.

2) Alternative 2 - The no action alternative (continued operation as required by the existing licenses)

3) Alternative 3 - FERC staff-recommended alternative, which includes existing operations and most of APC's proposed environmental measures with some staff modifications. This alternative is identified as the FERC preferred alternative in the DEIS.[3]

[2] p. xiii of Martin Dam DEIS
[3] p. xiv thru xv of Martin Dam DEIS

EPA Comments

Water Quality Standards

State water quality standards programs include designated uses, criteria to protect those uses, and an antidegradation policy (CWA Section 303(c); 40 CFR § 131). Section 401 of the CWA additionally protects these water quality standards, requiring state certification that federal activities which may result in any discharge will comply with state water quality standards. Further, Section 404(b)(1) Guidelines state that no such work shall be permitted if it would cause or contribute to "violations of any applicable State water quality standard" (40 CFR § 230.10(b)(1)), or if it would "cause or contribute to significant degradation of the waters of the United States" (40 CFR § 230.10(c)).

The Alabama Department of Environmental Management (ADEM) issued the 401 Water Quality Certification (WQC) for the Martin Dam Project on May 9, 2011 with conditions based on APC's proposed operations described in their FERC application. ADEM provided the following conditions within the 401 WQC:

- monitor the Martin dam tailrace for DO and temperature during generation at 30-minute intervals from June 1 to October 31 for a period of 3 years;
- provide DO and temperature monitoring reports to ADEM within 90 days of the end of the annual monitoring; and
- if monitoring does not show compliance with the 4.0 mg/L DO standards, Alabama Power would be required to implement measures to ensure compliance.[4]

EPA Comment / Recommendation - The Alabama water quality standard for DO is a daily dissolved oxygen concentration of not less than 5 mg/l. However, the WQS states,"[i]n no event shall the dissolved oxygen level be less than 4.0 mg/l due to hydroelectric turbine discharges from existing hydroelectric generation impoundments.[5]" In a June 29, 2009, response to public comments for the State Triennial Review of WQS, ADEM clarified the hydroelectric generation portion of the state water quality standards:

> "The Department interprets the provisions for dissolved oxygen criteria at 335-6-10-.09 regarding hydroelectric impoundments to mean that during periods when there is no discharge from the impoundment the applicable dissolved oxygen criterion is 5.0 mg/l in waters with the Public Water Supply and Fish and Wildlife designated uses. The applicable dissolved oxygen criterion during periods when the impoundment is discharging is 4.0 mg/l. These values do not indicate an instantaneous transition from one dissolved oxygen criterion to the next after the start or stop of impoundment discharge."

The conditions regarding monitoring and ensuring compliance with the State WQS should more accurately follow ADEM's clarification. Specifically, the monitoring location should be clearly noted and monitoring data should be clearly identified as to when it is being collected – either

[4] p. 70-71 of Martin Dam DEIS

[5] ADEM WQS Chapter 335-6-10-.09 Specific Water Quality Criteria, (5) Fish and Wildlife, (e) Specific criteria, 4. Dissolved Oxygen

during generation of power or when power is not being generated, so that it can be compared for compliance with the applicable criteria.

ADEM's standard continues by adding, "[t]he Environmental Protection Agency, in cooperation with the State of Alabama and parties responsible for impoundments, shall develop a program to improve the design of existing facilities." Reissuance of a FERC license would be one of the most opportune times to consider an evaluation of improving the design of existing facilities as contemplated by the standards. However, no mention is made of this provision. Based on the existing water quality standard for DO, EPA recommends the FEIS provide additional details on what programs and design changes have been made over the life of the previous FERC license for the Martin Dam project to meet this goal of the existing standard.

EPA supports the three years of DO monitoring proposed in the WQC, but is concerned that the monitoring proposed may not be adequate to capture non-compliance events of the 4.0 mg/L DO standard. The new FERC license may be issued for a 50 year period, and EPA is concerned that the monitoring proposed in the WQC may not capture future low flow events resulting from droughts that could cause or contribute to non-compliance events of the DO standard. In addition to the required three years of monitoring proposed in the state WQC, EPA supports the recommendation that additional DO monitoring be included and that, in particular, all future low-flow events be monitored when the potential for non-compliance of the DO standard is high. In addition, EPA recommends that FERC and or APC provide additional clarification in the FEIS on what additional measures (or adaptive management) that would be implemented to ensure compliance with the DO standard in the event the standard is not met. Lastly, EPA request that FERC provide clarification in the FEIS regarding how far downstream from the project the 4.0 mg/L DO WQS applies.

Instream Flow

Since the date of the last Martin Dam Project license issuance, and even since the date of the initial scoping for this EIS, the science related to instream flows has evolved significantly. The re-issuance of the license for the Martin Dam Project provides an opportunity to incorporate the latest science and successful practices for regulating flows to improve water quality, meet designated uses and, where possible, restore the hydrologic condition and ecological integrity of the river system.

Aquatic plant and animal species have evolved life cycle patterns directly tied to the primary components of hydrologic variability: frequency, magnitude, duration, timing and rate of change of natural flows. Every aspect of the lives of aquatic plants and animals is cued by and inextricably linked to the natural variability of our rivers and streams, which is often absent in highly regulated systems.

EPA Comment / Recommendation - The understanding of how to adapt dam operations to improve both recreational uses and protect for aquatic life has evolved significantly. In Richter's "Restoring Environmental Flows by Modifying Dam Operations,[6]" it is stated that there is "...tremendous opportunity... for modifying the operations of existing dams to recover many of the environmental and social benefits of healthy ecosystems that have been compromised by

[6] Richter, et al (2007)

present modes of dam operation." Yet, the DEIS includes almost no improvements on the operation of the dams for sustainable flows. This is a serious deficit of the DEIS. It might be suggested that this license does not need flow modifications because the flows released from Martin Dam go directly into the Yates impoundment[7] and then into the Thurlow development. Both of these FERC licenses were issued in 1994 and expire in 2034. However, Yates and Thurlow developments "operate as run-of-river, with limited re-regulating capacity for the peaking releases from Martin dam, thus flows downstream of Yates and Thurlow largely reflect the releases from Martin Dam." Downstream of Thurlow Dam the Tallapoosa River flows 49.7 miles before reaching the confluence with the Coosa River to form the Alabama River. The opportunity to affect such a significant length of river segment should not be missed by not including an evaluation on improving instream flows.

EPA encourages incorporation of variable flows in the Martin Dam Project license, including the seasonal, intra-annual and inter-annual variable flow patterns needed to maintain or restore processes that sustain natural riverine characteristics. Naturally variable flows are also a major determinant of physical habitat in streams and rivers and directly affect biological composition. The DEIS states that the 1994 licenses for the Yates and Thurlow project, requires Alabama Power to provide a continuous 1,200 cfs minimum flow release from the Thurlow powerhouse and that the "minimum flow protects aquatic resources including water quality and aquatic habitat in the downstream riverine reach."[8] These statements, which are used to support the Martin Dam operation, do not reflect the current scientific understanding that flows across the range of the natural hydrograph are important for maintaining the structure and function of aquatic ecosystems rather than regulating a river to meet a static low flow target.

Hydroelectric dams that have extreme daily fluctuations in flow and a high rate of change between high and low flows "have no natural analogue in freshwater systems and represent an extremely harsh environment of frequent, unpredictable flow disturbance.[9]" Modifying flow regimes provides an opportunity to positively alter habitat and influence species diversity, distribution and abundance. Therefore, EPA recommends that, where possible, the Martin Dam Project license be issued in a manner to mimic the natural conditions as closely as possible in the downstream waters. As recommended in our NEPA comment letter on the ACT WCM dated May 31, 2013, EPA suggests the use of multiple endpoints to demonstrate the protection of aquatic life designated uses. Relevant endpoints include floodplain connectivity (inundation, maintenance of off-channel habitats, wetted perimeter, out-of-bank habitats) and habitat suitability analysis.

EPA strongly recommends that the FEIS be revised to examine improvement to instream flows. The FERC has now worked successfully on the incorporation of instream flow improvements into other license renewals, such as on the Saluda in South Carolina, that could be used as a reference. These have included provisions to stabilize extreme lake fluctuations and to provide benefits to both the recreational uses of the lakes while also supporting downstream flows. As well, the USACE has successfully incorporated improvements that have resulted in both an economic as well as ecological benefit, such as the Green River in Kentucky – part of the

[7] Martin Dam DEIS, Pg. 16
[8] Martin Dam DEIS, Pg. 17
[9] Arthington (2012)

Sustainable Rivers program. Substantial expertise resides within the resource agencies, state and federal government, advocacy organizations and academic institutions within Alabama, such as Auburn University's Water Resources Center. Lastly, EPA stands ready to assist in the coordination of this review as needed.

Aquatic Life and Endangered Species

EPA understands that FERC has coordinated with the US Fish and Wildlife Service (FWS) regarding potential impacts to T&E species and any associated mitigation regarding the proposed action. EPA also understands that through these coordination efforts the FWS provided recommendations to FERC for the Martin Dam Project relicense in a letter filed April 6, 2012. The FWS provided five recommendations regarding the proposed relicense: 1) Shoreline Management Plan (SMP): In order to protect fish spawning and rearing habitat, and maintain wildlife habitat diversity, no new sea walls should be constructed unless necessary to protect land and property; 2) SMP: In order to protect the shoreline from erosion and protect sensitive resources, encourage shoreline developments to maintain a 30-foot-wide control strip within project boundary, and increase the buffer width to at least 100 feet; 3) Continue Alabama Power's support of aquatic restoration within the Mobile Basin and work with Interior and Alabama DCNR to identify suitable habitats (primarily tributaries) for species reintroductions within the Martin Dam Project boundary; 4) Consider utilizing the Tallapoosa River portion of the Alabama DROP when assessing drought operations; 5) Within the Core Management Area in the WMP, Alabama Power should manage towards a desired forest condition consistent with the "good quality foraging habitat" for the federally listed endangered red-cockaded woodpecker, a longleaf pine ecosystem. FERC adopted FWS recommendations 1, 4, 5, partially adopted 2, and did not adopt recommendation 3.

EPA Comment / Recommendation – The State of Alabama has significant aquatic biodiversity that is recognized both nationally and globally. In comments presented to ADEM in November 2012, EPA strongly supported Alabama's efforts to ensure greater stewardship of these resources.[10] *Rivers of Life*, a NatureServe report on aquatic biodiversity, highlights the state of Alabama and the Mobile River basin, in particular, as having "extraordinarily diverse assemblages of freshwater animal species...," including describing Alabama waters as a "treasure trove of botanical life".[11] However, that report notes that many of Alabama's species are vulnerable. Conservation practices and development of instream flow protections may provide the safeguards needed for many of these species that make Alabama a unique ecological treasure. EPA encouraged ADEM to acknowledge and support the exceptional aquatic biodiversity of Alabama as it works toward the completion of the statewide water management plan. EPA also supports the adoption of all of the FWS proposed recommendations for the Martin Dam Project relicense that would also protect this significant biodiversity.

Coordination with the U.S. Army Corps of Engineers (USACE)

EPA notes that in addition to the recent release of the Draft EIS for the ACT Water Control Manual (WCM) update, FERC relicensing was recently completed for several Coosa River projects and APC has requested to modify winter pool levels at the Weiss and Logan Martin Lakes.

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[10] EPA to ADEM, November 19, 2012

[11] (Master et al. 1998)

Since APC projects control 78% of the water resources in the ACT River Basin, EPA recommends that the FERC coordinate license renewals with the ACT WCM update so that basin management actions can be evaluated together via a comprehensive, public process such as EIS development. In general, EPA has concerns that the FERC relicensing actions are not in sync with the USACE WCM update However, EPA notes that the DEIS provides information regarding FERC's position requiring coordination efforts between USACE and the APC regarding flood control procedures.[12]

EPA Comment / Recommendation - In order to affectively improve these systems, there needs to be better coordination for permit reissuance. EPA notes that there is a lack of coordination of the timing for re-evaluating all of the systems in the ACT, with the dams on the Coosa and the Tallapoosa all on different schedules. In the last 15 years, EPA has found significant benefit in switching to a basin-wide approach for monitoring, assessment and permit issuance so that river basins can be addressed holistically. EPA recommends that FERC consider changing the expiration dates of FERC licenses so that in the future river systems can be evaluated at the same time, optimally for the entire ACT system, but at a minimum for the Tallapoosa dams - Yates, Thurlow and Martin- as the operations of these systems are directly related. Until such time as the license renewals can be synchronized, EPA recommends that FERC consider working with the USACE to adaptively manage these dams such that when one license is evaluated, improvements in instream flow and water quality standards can be adaptively added to those licenses that are not up for renewal.

Shoreline Management Plan

EPA supports the development of the Shoreline Management Plan (SMP) especially provisions of the plan that address shoreline Best Management Practices to control shoreline erosion and reduce sedimentation in the Lake. EPA notes that the DEIS provides a timeline for implementation of the SMP but not the specific provisions of the plan.

EPA Comment / Recommendation – EPA supports maintaining natural shoreline conditions when possible. EPA recommends that the FEIS provide a clearer description of how and when the different components of the SMP will be implemented by APC.

Drought Management and Tailrace Monitoring Plans

EPA notes that FERC is requiring APC to submit a *Drought Management Plan* and a *Tailrace Water Quality Monitoring Plan* within a certain amount of time after issuance of the license for the Martin Dam project.

EPA Comment / Recommendation - EPA request that FERC and APC coordinate with EPA Region 4 on the development of these plans. EPA Region 4 contacts for these plans are listed below:

- Lisa Perras Gordon – EPA Region 4 – Water Quality Standards
- Lydia Mayo – EPA Region 4 – Water Quality Standards

[12] p. 159 of Martin Dam DEIS – references proposed modification to Exhibit H

- Dan Holliman – EPA Region 4 – NEPA Program Office

Stakeholder Comments
EPA notes that specific comments provided to FERC during the relicensing process were not provided in the DEIS.

EPA Comment / Recommendation - EPA recommends that FERC provide all comments provided during the licensing process, scoping process, and DEIS comment period in the FEIS. In addition, responses to comments on the DEIS should be provided in a dedicated section of the FEIS.

Public Education and Outreach Program Plan
EPA notes that APC proposes to develop a *Public Education and Outreach Program Plan* to enhance the public's ability to access information regarding the *Shoreline Permitting Program.* EPA supports the public engagement activities proposed by APC, especially in the areas of education regarding BMP implementation to reduce erosion and sedimentation in Lake Martin.

Environmental Justice
Pursuant to the Executive Order 12898 entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations" and the accompanying Presidential Memorandum, EPA is unable to locate an EJ analysis in the DEIS regarding the Martin Dam Project relicense.

EPA Comment / Recommendation – While EPA understands that FERC is an independent agency, similar to the Nuclear Regulatory Commission, we recommend that the FEIS include an EJ analysis that includes descriptions of the local demographics and identifies low-income and minority populations that have the potential to be impacted by the proposed action. Should the demographic analysis identify minority and low-income populations, the FEIS should describe efforts made to meaningfully engage these populations in the decision-making process. In addition, EPA recommends the FEIS identify communities with EJ concerns that may engage in subsistence activities within the Lake Martin boundaries (i.e., subsistence fishing). FERC should also evaluate the potential for communities with EJ concerns to be impacted downstream as a result of the proposed action. A summary of EJ comments or concerns identified during the public involvement process along with agency responses to those concerns and efforts to avoid, minimize or mitigate potential impacts should also be included in the FEIS.

Children's Health
Pursuant to Executive Order 13045 on Children's Health and Safety which directs each Federal agency, to the extent permitted by law and appropriate, to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and to ensure that its policies, programs, and activities, and standards address these risks. An analysis of children's health and safety issues associated with the proposed project was not located in the DEIS. However, EPA appreciates FERC including information regarding fish consumption advisories for women of child-bearing age and for small children for Thurlow reservoir and the lower Tallapoosa.

EPA Comments/Recommendations: Similar to the EJ analysis, the analysis and disclosure of potential effects of the proposed action on children should be considered because the behavioral and physiological traits of children render them more susceptible and vulnerable to environmental health and safety risks than adults. The EIS should identify demographics of children under the age of 18, including children that may use or be affected by the resource (i.e. children within the vicinity of the dam and that live downstream of the project). The potential direct, indirect and cumulative environmental and human health effects of the proposed project should be clearly described and analyzed in the FEIS. If there is a possibility for disproportionate impacts to children related to the proposed action efforts to avoid, minimize and mitigate those impacts should be documented.

Editorial Comments

- An example of flood inundation mapping is provided on p.58 of the DEIS. Since downstream flooding is a significant concern of several stakeholders, EPA recommends adding all of the flood inundation maps from this report into the EIS or attached the full report as an Appendix of the FEIS.
- Tables 3-23 thru 3-25 – EPA notes that Wet/Dry/Normal years are not defined in the text or the footnote for these tables. EPA recommends that FERC provide average annual rainfalls corresponding to these terms.
- EPA notes that FERC uses 507.6 **miles** to quantify "Unclassified" land on p. 122 and 507.6 **acres** on p. 125. This appears to be a typo.
- On p. 156 it is stated that "Based on our independent review of agency and public comments filed on this project and our review of the environmental and economic effects of the proposed project and its alternatives, we select the no-action alternative with most of Alabama Power's proposed environmental measures and staff-recommended modifications as the preferred alternative." However, EPA notes that FERC defines the "staff alternative" as the preferred alternative throughout the DEIS. EPA recommends clarification in this section in the FEIS that the staff alternative is the preferred alternative.

Summary

Based on our analysis of the above referenced proposed action, EPA rates this DEIS as **"EC-2" i.e., EPA has "Environmental Concerns and Request Additional Information"** in the Final EIS (FEIS). EPA's rating system criteria can be found online at: http://www.epa.gov/oecaerth/nepa/comments/ratings.html.

Our primary concerns associated with the proposed actions are related to maintaining downstream flows to ensure adequate water quality for support aquatic life, implementation of shoreline management plan, implementing a monitoring plan than ensures compliance with the DO water quality standard, and evaluating potential EJ and children health impacts. We request that a dedicated section of the FEIS include specific responses to our comments.

EPA appreciates the opportunity to review the DEIS. Should FERC have questions regarding our comments, please feel free to contact Dan Holliman of my staff at 404/562-9531 or holliman.daniel@epa.gov.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Environmental Accountability

cc: Alabama Department of Environmental Management
US Fish and Wildlife Service

From:	Holliman, Daniel
To:	"david.turner@ferc.gov"
Subject:	FW: Martin Dam FERC P No. 349-173 DEIS CEQ#20130163
Date:	Tuesday, August 13, 2013 5:29:00 PM
Attachments:	20130163.pdf

Mr. Turner,

Please see email below and attached NEPA comments on the above referenced FERC project. I received an out-of-office reply from Stephen and wanted to make sure that FERC received our comments.

Hard copy of our letter is in the mail.

Thanks,
Dan

Dan Holliman
EPA Region 4 - NEPA Program Office
tel 404.562.9531 | holliman.daniel@epa.gov

From: Holliman, Daniel
Sent: Tuesday, August 13, 2013 5:19 PM
To: 'stephen.bowler@ferc.gov'
Cc: Gordon, Lisa Perras; Mayo, Lydia; Mueller, Heinz; Kajumba, Ntale; Davis, Gary
Subject: Martin Dam FERC P No. 349-173 DEIS CEQ#20130163

Stephen,

Please find attached EPA Region 4 comments on the DEIS for the Martin Dam FERC License – P. No. 349-173 (CEQ# 20130163).

Hard copy of the letter is in the mail.

If you have any questions give me a call.

Thanks,
Dan

Dan Holliman
USEPA Region 4 | NEPA Program Office
61 Forsyth Street SW | Atlanta, GA 30303

tel 404.562.9531 | holliman.daniel@epa.gov

Region 4 NEPA: http://www.epa.gov/region4/opm/nepa/index.html